## **CLAIMS**

5

## 1. A compound of formula I

and pharmaceutically acceptable salts thereof, in which

A is situated in the para position and represents A1 or A2 below

wherein

15

20

10 R is hydrogen;

-OR  $^{a}$ , wherein R  $^{a}$  represents hydrogen, alkyl, aryl or alkylaryl;

-NR<sup>a</sup>R<sup>b</sup>, wherein R<sup>a</sup> and R<sup>b</sup> are the same or different and R<sup>a</sup> is as defined above and R<sup>b</sup> represents hydrogen, alkyl, aryl, alkylaryl, cyano, - OH, -Oalkyl, -Oaryl, -Oalkylaryl, -COR<sup>c</sup> or -SO<sub>2</sub>R<sup>d</sup>, wherein R<sup>c</sup> represents hydrogen, alkyl, aryl or

alkylaryl and R<sup>d</sup> represents alkyl, aryl or alkylaryl;

R<sup>1</sup> is alkyl, aryl, alkenyl, alkynyl, cyano;

-OR<sup>e</sup>, wherein R<sup>e</sup> is alkyl, acyl, aryl or alkylaryl;

-O-[CH<sub>2</sub>]<sub>m</sub>-OR<sup>f</sup>, wherein R<sup>f</sup> represents hydrogen, alkyl, acyl, aryl or alkylaryl and m represents an integer 1-8;

-OCONR aRc, wherein R and R are as defined above;

-SR<sup>d</sup>, wherein R<sup>d</sup> is as defined above;

-SOR<sup>d</sup>, wherein R<sup>d</sup> is as defined above;

- -SO<sub>2</sub>R<sup>d</sup>, wherein R<sup>d</sup> is as defined above;
- -SO<sub>2</sub>NR<sup>a</sup>R<sup>f</sup>, wherein R<sup>f</sup> and R<sup>a</sup> are as defined above;
- -SO<sub>2</sub>OR<sup>a</sup>, wherein R<sup>a</sup> is as defined above;
- COOR<sup>d</sup>, wherein R<sup>d</sup> is as defined above;
- 5 R<sup>2</sup> is hydrogen, alkyl, aryl, or alkylaryl,

R<sup>3</sup> and R<sup>4</sup> are the same or different and each represents hydrogen, alkyl, aryl, or alkylaryl, n is an integer 1-6,

m is an integer 0 or 1;

D is situated in the ortho, meta or para position and represents alkyl, acyl, aryl, alkylaryl,

- halogen, -CN and NO<sub>2</sub>, wherein the alkyl, aryl, or alkylaryl group is optionally substituted by
  R<sup>b</sup>;
  - -NR°COORa, wherein R° and Ra are as defined above;
  - -NR°COR<sup>a</sup>, wherein R° and R<sup>a</sup> are as defined above;
  - -NR<sup>c</sup>R<sup>a</sup>, wherein R<sup>c</sup> and R<sup>a</sup> are as defined above;
- 15 -NR°SO<sub>2</sub>R<sup>d</sup>, wherein R° and R<sup>d</sup> are as defined above;
  - -NR°CONR<sup>k</sup>R°, wherein Ra, R° and Rk are as defined above;
  - -NR  $^{c}$ CSNR  $^{a}$ R $^{k}$ , wherein R $^{a}$ , R $^{c}$  and R $^{k}$  are as defined above;
  - -OR<sup>a</sup>, wherein R<sup>a</sup> is as defined above;
  - -OSO<sub>2</sub>R<sup>d</sup>, wherein R<sup>d</sup> is as defined above;
- 20 -SO<sub>2</sub>R<sup>d</sup>, wherein R<sup>d</sup> is as defined above;
  - -SOR<sup>d</sup>, wherein R<sup>d</sup> is as defined above;
  - -SR°, wherein R° is as defined above;
  - -SO<sub>2</sub>NR<sup>a</sup>R<sup>f</sup>, wherein R<sup>f</sup> and R<sup>a</sup> are as defined above;
  - -SO<sub>2</sub>OR<sup>a</sup>, wherein R<sup>a</sup> is as defined above;
- 25 -CONR<sup>c</sup>R<sup>a</sup>, wherein R<sup>c</sup> and R<sup>a</sup> are as defined above;
  - -OCONRfRa, wherein Rf and Ra are as defined above;
  - D' is situated in the ortho, meta or para position and represents hydrogen, alkyl, acyl, aryl, alkylaryl, halogen, -CN, -NO<sub>2</sub>,
  - -NR $^f$ R $^b$ , wherein R $^f$  and R $^b$  are as defined above;
- 30 -ORf, wherein Rf is as defined above;
  - -OSO<sub>2</sub>R<sup>d</sup>, wherein R<sup>d</sup> is as defined above;

5

30

D'' is situated in the ortho, meta or para position and represents  $\text{hydrogen, alkyl, acyl, aryl, alkylaryl, halogen, -CN, -NO2, -NR}^f R^b \text{ wherein } R^f \quad \text{and} \quad R^b \text{ are as defined above;}$ 

-OR , wherein R is as defined above.

-OSO<sub>2</sub>R<sup>d</sup>, wherein R<sup>d</sup> is as defined above

and T represents O, S or NR<sup>t</sup> wherein R<sup>t</sup> represents alkyl or alkylaryl provided that when A is A1 and R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup> each represent hydrogen and R<sup>1</sup> is OR<sup>e</sup> wherein R<sup>e</sup> is as previously defined then T is not O;

wherein the term "aryl" denotes a substituted or unsubstituted phenyl, furyl, thienyl or pyridyl group, or a fused ring system of any of these groups;

wherein the term "alkyl" denotes a straight or branched, substituted or unsubstituted alkyl group having from 1 to 6 carbon atoms or a substituted or unsubstituted cycloalkyl having from 3 to 6 carbon atoms and wherein the term "substituted" denotes substitution by one or more alkyl, alkoxy, halogen, thiol, nitro, hydroxy, acyl, aryl or cyano groups or an amino group optionally substituted by one or two alkyl groups:

with a first proviso that when D is CH<sub>3</sub>S(O)<sub>2</sub>O and m is 1 and D' is H and T is O and n=2 and A is a group CH<sub>2</sub>CH(SCH<sub>2</sub>CH<sub>2</sub>Ph)COR<sup>x</sup> in which the phenyl is substituted in the 4 position by OH, Cl or F and in which R<sup>x</sup> represents OH, or a protecting group for a carboxylic hydroxy group including a ethoxy or benzyloxy then D'' is not H;

20 and with a second proviso that when m is 1 and D is CH<sub>3</sub>S(O)<sub>2</sub>O and D' is H and T is O, S or NR and wherein R represents a H, a C<sub>1-6</sub>alkyl group or a phenyl C<sub>1-6</sub>alkyl group and n=2 and

A is a group CH<sub>2</sub>CH(OC<sub>2</sub>H<sub>5</sub>)COR<sup>x</sup> in which R<sup>x</sup> represents OH, or a protecting group for a

carboxylic hydroxy group including a C<sub>1-6</sub>alkoxy group or benzyloxy then D'' is not H.

- 25 2. A compound of formula I as claimed in claim 1 in which A represents a group of formula -CH<sub>2</sub>-CH (CO<sub>2</sub>H)-S(O)<sub>p</sub>-(CH<sub>2</sub>)<sub>q</sub>-Ar wherein p is 0, 1 or 2; q is 1, 2, 3 or 4; and Ar is phenyl or thienyl each of which is optionally substituted by one or more hydroxy, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, halogen, cyano or an amino group optionally substituted by one or two alkyl groups.
  - 3. A compound of formula I as claimed in claim 1 represented by formula IA

$$T = [CH_2]$$

$$CO_2H$$

IA

or a pharmaceutically acceptable salt thereof in which

D represents C<sub>1-6</sub>alkylsulfonyloxy, aroyl, or a C<sub>1-6</sub>alkyl group;

T represents O, S or NR<sup>t</sup> wherein R<sup>t</sup> represents alkyl or alkylaryl;

5 n is 1, 2 or 3;

p is 0, 1 or 2;

q is 1 or 2; and

Ar is phenyl or thienyl each of which is optionally substituted by hydroxy, C<sub>1-6</sub>alkyl, C<sub>1</sub>.

6alkoxy, halogen, cyano or an amino group optionally substituted by one or two alkyl groups
and wherein the group containing the carboxylic acid group is attached to the phenyl ring
meta or para to the group (CH<sub>2</sub>)n-T-.

- 4. A compound selected from one or more of the following:
- 2-[(4-cyanobenzyl)thio]-3-[4-(2-{4-[(methylsulfonyl)oxy]phenoxy}ethyl)-phenyl]propanoic acid;
  - 2-({2-[4-(dimethylamino)phenyl]ethyl}thio)-3-[4-(2-{4-[(methylsulfonyl)oxy]phenoxy}-ethyl)phenyl]propanoic acid;
  - 3-[4-(2-{4-[(methylsulfonyl)oxy]phenoxy}ethyl)phenyl]-2-{[2-(2-thienyl)ethyl]thio}-propanoic acid;
- 20 2-{[2-(2-fluorophenyl)ethyl]thio}-3-[4-(2-{4-[(methylsulfonyl)oxy]phenoxy}-ethyl)phenyl]-propanoic acid;
  - 2-{[2-(3-methoxyphenyl)ethyl]thio}-3-[4-(2-{4-[(methylsulfonyl)oxy]phenoxy}-ethyl)phenyl]propanoic acid;
  - $2-\{[2-(4-hydroxyphenyl)ethyl]sulfinyl\}-3-[4-(2-\{4-[(methylsulfonyl)oxy]phenoxy\}-4-[(methylsulfonyl)oxy]phenoxy\}-4-[(methylsulfonyl)oxy]phenoxy\}-4-[(methylsulfonyl)oxy]phenoxy]-4-[(methylsulfonyl)oxy]-4-[(methylsulfonyl)o$
- 25 ethyl)phenyl]propanoic acid;
  - 3-{4-[2-(4-benzoylphenoxy)ethyl]phenyl}-2-{[2-(4-hydroxyphenyl)ethyl]thio}propanoic acid;
  - methyl 2-({2-[4-(benzyloxy)phenyl]ethyl}thio)-3-{4-[2-(2-propylphenoxy)ethyl]phenyl}-propanoate;

15

- 2-{[2-(4-hydroxyphenyl)ethyl]thio}-3-{4-[2-(2-propylphenoxy)ethyl]phenyl}propanoic acid;
- 2-{[2-(4-hydroxyphenyl)ethyl]thio}-3-[3-(2-{4-[(methylsulfonyl)oxy]phenoxy}-ethyl)phenyl]propanoic acid;
- 3-{4-[2-(2-benzyl-4-methanesulfonyloxyphenoxy)ethyl]phenyl}-2-[2-(4-hydroxyphenyl)-
- 5 ethylsulfanyl]propionic acid; and
  - 2-[2-(4-tert-butoxy-phenyl)ethylsulfanyl]-3-{4-[2-(4-methanesulfonyloxyphenoxy)ethyl]-phenyl}propionic acid
  - and pharmaceutically acceptable salts thereof.
- 5. A pharmaceutical formulation comprising a compound according to any one of claims 1 to 4 in admixture with pharmaceutically acceptable adjuvants, diluents and/or carriers.
  - 6. A pharmaceutical formulation comprising a compound according to any one of claims 1 to 4 in admixture with pharmaceutically acceptable adjuvants, diluents and/or carriers.
  - 7. A method of treating or preventing lipid disorders (dyslipidemia) whether or not associated with insulin resistance comprising the administration of a compound according to any one of claims 1 to 4 to a mammal in need thereof.
- 20 8. The use of a compound according to any one of claims 1 to 4 in the manufacture of a medicament for the treatment of lipid disorders (dyslipidemia) whether or not associated with insulin resistance.
- 9. A method of treating or preventing type 2 diabetes comprising the administration of an effective amount of a compound of formula I according to any one of claims 1 to 4 to a mammal in need thereof.
- 10. A pharmaceutical composition comprising a compound as claimed in any one of claims 1 to 4 combined with another therapeutic agent that is useful in the treatment of
   30 disorders associated with the development and progress of atherosclerosis such as hypertension, hyperlipidaemias, dyslipidaemias, diabetes and obesity.

15

11. A process for preparing a compound of formula I as claimed in claim 1 by reacting a compound of formula II

in which D, m, D' and T are as previously defined with a compound of formula III

Ш

in which n, A and D" are as previously defined and X is a leaving group for example halo or methanesulphonyloxy at a temperature in the range of 0-150°C optionally in the presence of an inert sovent.

12. A process to prepare a compounds of formula IA as claimed in claim3 by reacting a compound of formula IB

$$T - [CH_2]$$

$$CO - R^P$$

IB

in which D, T, n, p, q and Ar are as previously defined and R<sup>P</sup> represents a protecting group for a carboxylic hydroxy group with a de-protecting agent.